IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	Karin *et al.*	
Serial No.:	10/574,333	Group No.: 1636
Filed:	7/21/2008	Examiner: Celine X. QIAN
Entitled:	Compositions and Methods for Gene Expression	

DECLARATION UNDER 35 U.S.C. §1.131 BY DR. MICHAEL KARIN

Mail Stop AMENDMENT
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Examiner Qian:

1. I, Michael Karin, declare that I am a joint inventor of the subject matter of the pending claims of the above-identified application, as amended in the Response filed herewith.

2. Prior to June 3, 2003, I together with co-inventors Giuseppina Bonizzi and Magali Bebien jointly conceived of, and reduced to practice, the subject matter of the pending claims, as evidenced by Exhibit A.

3. Exhibit A is a copy of a draft manuscript entitled "The IKKα-dependent signaling pathway is required in stromal cells and B lymphocytes for p52:RelB activation FDC maturation and germinal center formation," naming me and co-inventors Giuseppina Bonizzi and Magali Bebien as co-authors.

4. The draft manuscript at Exhibit A was submitted to the scientific journal "Cell" prior to June 3, 2003.

5. Each of the experiments described in Exhibit A was carried out in this country.

6. Each of the experiments described in Exhibit A was carried out by one or more of the co-inventors and/or under the supervision of one or more of the co-inventors.

7. Exhibit A shows "Sequences of different κB sites" including GGGACTTTCC, GGGAGATTTG, AGGAGATTTG, and GGGATTTCCC. [1]

8. Exhibit A shows that probes containing sequence 5'-GGGAGATTTG-3' of Fig 4C "were efficiently recognized by RelB:p52" and "the detected protein-DNA complexes were specific as indicated by competition experiments."[2] Exhibit A[3] also shows that "RelB:p52 dimers are selectively recruited to the IKKα-dependent gene promoter" that contains 5'-NGGAGANNTG-3'. "The selective recruitment of RelB to the *Blc* and the *Elc* promoters" that contain the different κB sites of Exhibit A's Fig. 4C (i.e., 5'-NGGAGANNTG-3') depends on the "novel κB site that is preferentially recognized by RelB:p52 dimers. This unique sequence specificity . . . was previously unknown." In other words, the competition experiments referred to in Exhibit A describe contacting DNA sequences containing 5'-NGGAGANNTG-3' with polypeptide sequence RelB:p52 that contains the Rel homology domain. This contacting was performed in the presence and absence of competitive sequences, and was followed by determining the level of binding of the DNA sequences with the polypeptide sequences.

9. The undersigned declares further that all statements made herein of his own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false

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1 Exhibit A, Fig. 4C and page 22, 1st paragraph
2 Exhibit A, Page 9, 1st paragraph.
3 Exhibit A, page 11.

statements and the like so made are punishable by fine or imprisonment, or both, under §1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing therefrom.

Date: 9/7/11

Signed: _____

Michael Karin